KRAMER

KDS-SW2-EN7 Quick Start Guide

This guide helps you install and use your **KDS-SW2-EN7** for the first time.

Go to www.kramerav.com/downloads/KDS-SW2-EN7 to download the latest user manual and check if firmware upgrades are available.
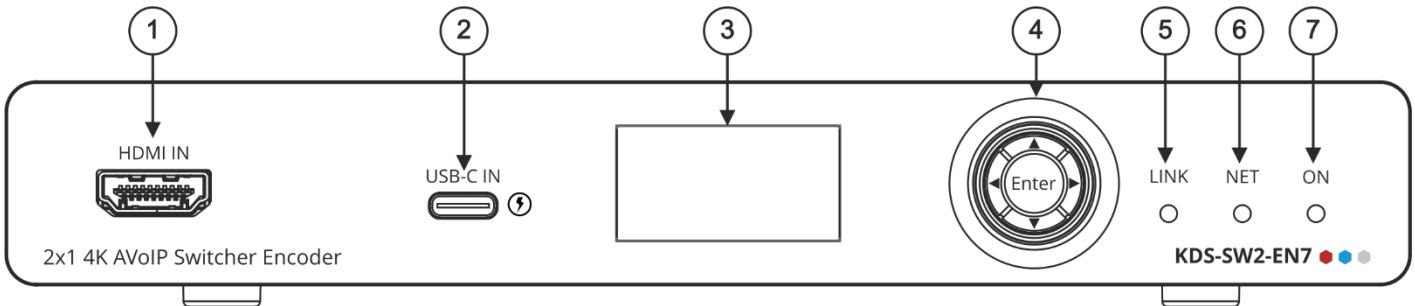
Step 1: Check what's in the box
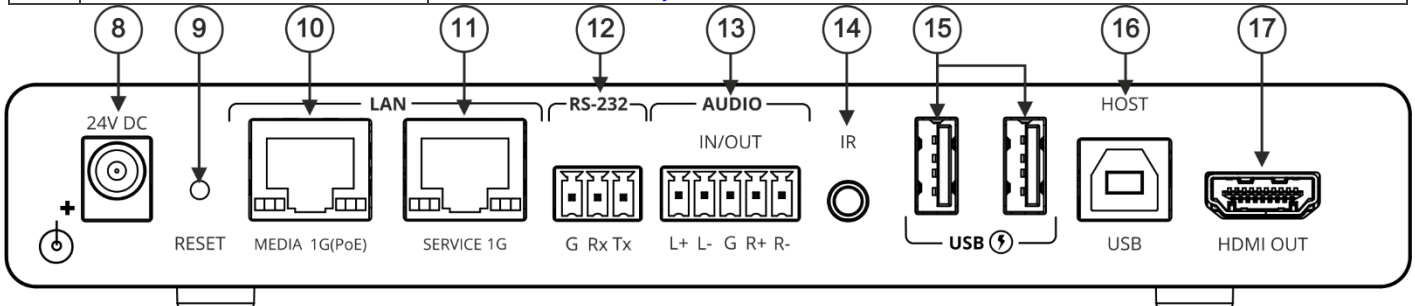
☑ **KDS-SW2-EN7 2x1 4K AVoIP** Switcher Encoder   ☑ 2 Bracket sets   ☑ 1 Quick start guide

Step 2: Get to know your KDS-SW2-EN7

#	Feature		Function
1	HDMI IN Connector		Connect to an HDMI acceptor.
2	USB-C IN Port		Connect to a USB-C source. • When powered by a Kramer 24V power supply (optional), charges sources (that support USB Power Delivery 2.0) up to 60W.
3	LCD Display		Use for device configuration such as input selection, unique channel/AV stream setting and EDID.
4	Menu Navigation Button	◄	Press to return to the previous menu.
		▲	Press to move up to the next configuration parameter.
		►	Press to go to the next menu.
		▼	Press to move down to the next configuration parameter.
		Enter	Press to accept changes.
5	LINK LED		See LED Functionality.
6	NET LED		See LED Functionality.
7	ON LED		See LED Functionality.

#	Feature	Function
8	24V/5A DC Connector	Connect to the power adapter (purchased separately).
9	RESET Recessed Button	Press and hold for 10 seconds to reset the device to its factory default values. All LEDs flash.
10	LAN MEDIA 1G(PoE) RJ-45 Port	Unicast: connect for streaming either directly to a decoder or via LAN. Multicast: connect to multiple decoders or connect to one decoder to which multiple decoders are daisy-chained via SERVICE (1G) port.

HDMI™
HIGH-DEFINITION MULTIMEDIA INTERFACE

P/N: 2900-301558QS   Rev: 2

#	Feature	Function
11	LAN SERVICE 1G RJ-45 Port	Used optionally for physical separation between AV and command streams to separate LAN for security and reliability purposes.
12	RS-232 3-pin Terminal Block Connector	Connect to an RS-232 device to use as a Gateway and bi-directional signal extension (even when no AV signal is extended).
13	AUDIO IN/OUT 5-pin Terminal Block Connector	Connect to a balanced analog stereo audio source/acceptor.
14	IR 3.5 Mini Jack	Connect to an IR sensor or emitter for bi-directional signal extension (even when no AV signal is extended). Expected voltage for IR receiver - (3.3V).
15	USB Type A Charging Ports (1 and 2)	Connect to USB devices, for example, to a speakerphone and webcam.
16	HOST USB Type B Port	Connect to a USB host.
17	HDMI OUT Connector	Connect to loop the signal.

LED Functionality

KDS-SW2-EN7 LEDs function as follows:
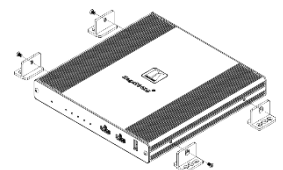
LED	Color	Definition
LINK LED	Lights Green	A link is established between **KDS-SW2-EN7** and the decoder is transmitting A/V signals.
	Flashes Green	A signal is established, and a problem is detected
NET LED	Off	No IP address is acquired.
	Lights green	A valid IP address has been acquired.
	Flashes Green very fast (for 60sec)	A device identification command is sent (Flag me).
	Lights Yellow	Device falls back to default IP address.
	Lights Red	Security is blocking IP access.
ON LED	Flashes Red	On fallback address acquiring, device 'ON' LED flashes continuously in slow 0.5/10sec cadence
	Lights Green	When power is on.
	Flashes Green Slowly	Device is in standby mode.
	Flashes green fast	FW is downloaded in the background.
	Flashes Green very fast (for 60sec)	A device identification command is sent (Flag me).
	Lights Yellow	Device falls back to default IP address
	Lights Red	Security is blocking IP access.
Post reboot, all LEDs light for 3 seconds then return to their normal LED display mode.		

Step 3: Mount KDS-SW2-EN7

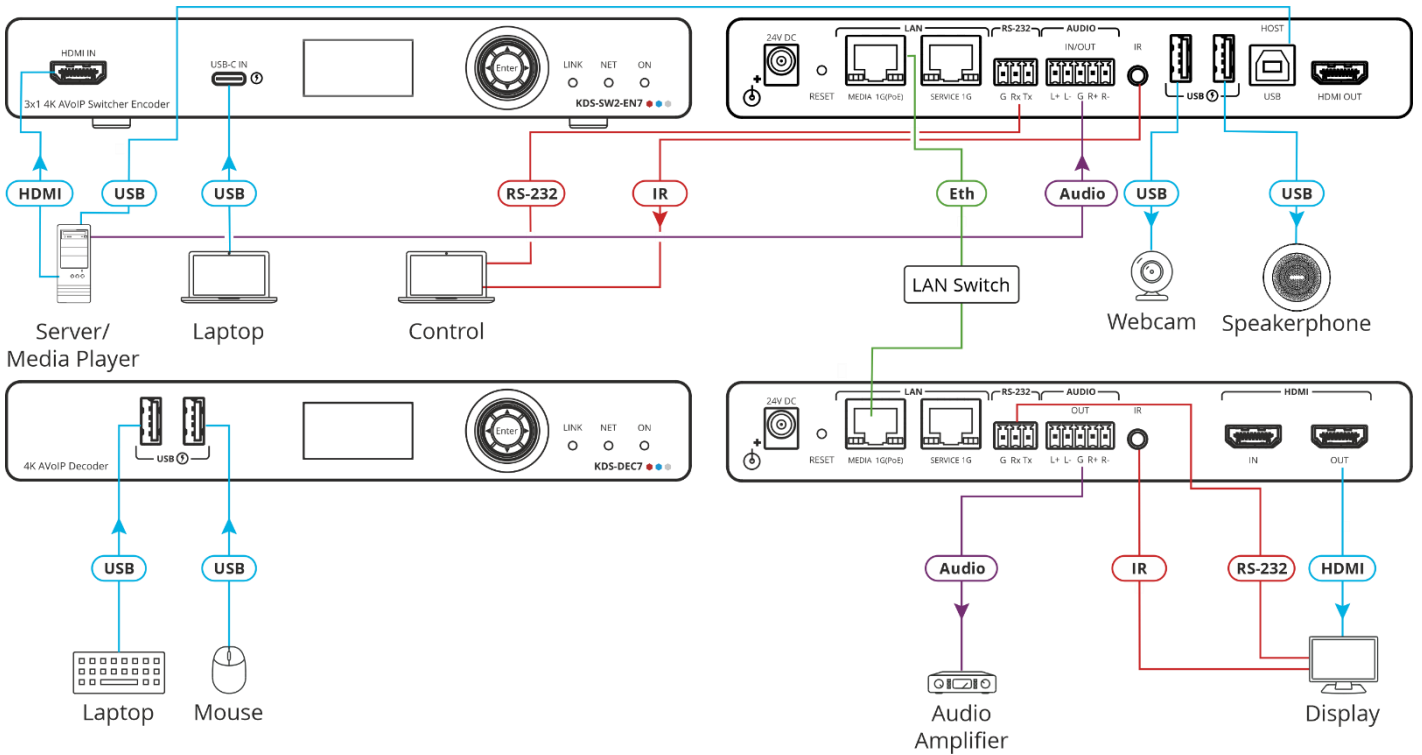Install **KDS-SW2-EN7** using one of the following methods:

- Attach the rubber feet and place the unit on a flat surface.
- Fasten a bracket (included) on each side of the unit and attach it to a flat surface (see www.kramerav.com/downloads/KDS-SW2-EN7).

- Mount the unit in a rack using the recommended rack adapter (see www.kramerav.com/product/KDS-SW2-EN7).

- Ensure that the environment (e.g., maximum ambient temperature & air flow) is compatible for the device.
- Avoid uneven mechanical loading.
- Appropriate consideration of equipment nameplate ratings should be used for avoiding overloading of the circuits.
- Reliable earthing of rack-mounted equipment should be maintained.
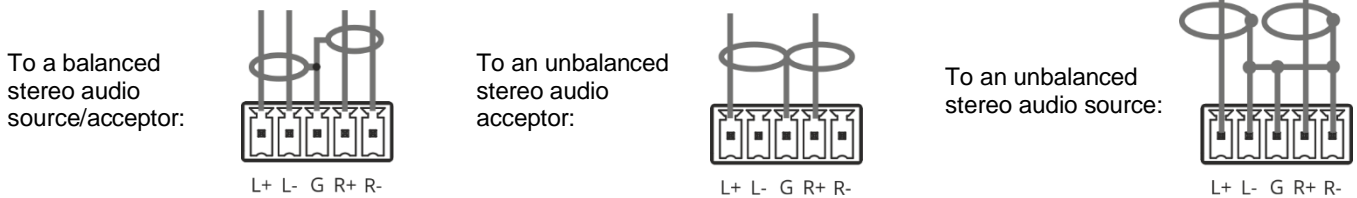- Maximum mounting height for the device is 2 meters.

Step 4: Connect inputs and outputs

Always switch OFF the power on each device before connecting it to your **KDS-SW2-EN7** and **KDS-DEC7**.

ⓘ **KDS-SW2-EN7** and **KDS-DEC7** can stream 4K video, requiring a gigabit Ethernet switch for high quality performance, since the maximum momentary transfer rate can reach 850Mbps. We recommend using AVoIP Ethernet switches that support: Multicast forwarding or filtering, IGMP Snooping, IGMP Querier, IGMP snooping fast leave and Jumbo frame (8000 bytes or larger).

Connecting the audio input/output

To a balanced stereo audio source/acceptor:

L+ L- G R+ R-

To an unbalanced stereo audio acceptor:

L+ L- G R+ R-

To an unbalanced stereo audio source:

L+ L- G R+ R-

ⓘ To achieve specified extension distances, use the recommended Kramer cables available at www.kramerav.com/product/KDS-SW2-EN7. Using third-party cables may cause damage!

Step 5: Connect power

By-default, the device uses PoE for powering the device.
Optionally, you can separately purchase a power adapter to connect to the product and plug into the mains electricity.

⚠ Safety Instructions (See www.kramerav.com for updated safety information)
Caution:
- For products with relay terminals and GPIO ports, please refer to the permitted rating for an external connection, located next to the terminal or in the User Manual.
- There are no operator serviceable parts inside the unit.
Warning:
- Use only the power cord that is supplied with the unit.
- Disconnect the power and unplug the unit from the wall before installing.

Step 6: Operate KDS-SW2-EN7

Allocating the IP Address via LCD screen menu

KDS-SW2-EN7 IP default address is 192.168.1.39. By default, DHCP is enabled, and assigns an IP address to the device. If DHCP Server is not available, for example, in case a device is connected directly to the laptop, that device gets the default IP address. If this IP addresses is already in use, the system searches for a random unique IP in the range of 192.168.X.Y. the allocated IP address can be identified using the LCD screen menu.

To allocate the IP address via LCD screen Menu:

1. Connect the device to the 24V DC power adapter and connect the adapter to the mains electricity. The ON LED lights green, and the LINK LED flashes (indicating that no streaming activity is detected).

2. Use the Navigation button to view the assigned IP address on the LCD screen:

   ▪ DEV STATUS > LAN1 Status

   ▪ DEV STATUS > LAN2 Status (if the Service port connected as well).

Setting Channel Number

Each encoder requires a unique channel number, and the connected decoders should be tuned to that encoder channel. You can set the channel number via the LCD screen menu or the embedded web pages.

To set the channel number for KDS-SW2-EN7 via LCD screen menu:

1. Connect the device to the 24V DC power adapter and connect the adapter to the mains electricity. The ON LED lights green, and the LINK LED flashes (indicating that no streaming activity is detected).

2. In the LCD screen menu, go to DEV SETTINGS > CH DEFINE.

3. Change channel number using arrow buttons and set a unique channel number.

4. Press **Enter** to save your selection.

To set the channel number via web pages:

1. Connect the **KDS-SW2-EN7** Ethernet port to the network and power the device.

2. Access the embedded web pages.

3. In the **Main** page:

   For **KDS-SW2-EN7**:

   ▪ Go to **AV Routing** page.

   ▪ Select **Channel ID** and define the channel ID number.